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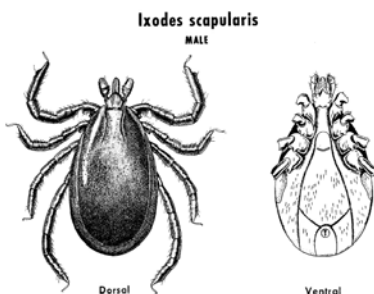
Warm Spring Weather Brings Threat of Tick-Transmitted Diseases

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The warm spring weather is bringing Hoosiers outdoors early this year, which means they may encounter disease-carrying ticks.

The Indiana State Department of Health advises Hoosiers to take precautions when they plan outdoor activities in order to avoid contact with ticks. Ticks become active as soon as the weather begins to warm up, and these tiny pests may carry Lyme Disease, Rocky Mountain Spotted Fever (RMSF), or Ehrlichiosis.

Tick-borne diseases occur every year in Indiana. Since 1991, Indiana has had 195 confirmed cases of Lyme Disease, 59 confirmed cases of RMSF, and 26 confirmed cases of Ehrlichiosis. A list of confirmed cases by county is available upon request.



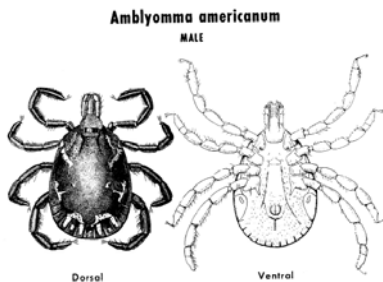
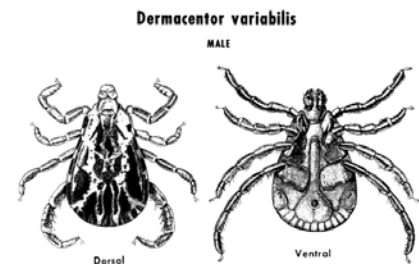
In most cases of Lyme Disease, a persistent, slowly expanding "bullseye" red rash (erythema migrans) that is paler at the center than at the edges appears 3-32 days (average 7-10 days) after exposure. Other symptoms include joint pain or swelling

(especially in the knees), fatigue, difficulty concentrating, headache, stiff neck or weakness of the facial muscles, dizziness, and an irregular heartbeat. The causative agent is *Borrelia burgdorferi*, a bacterium that is transmitted in the Midwest by the *Ixodes scapularis* tick.

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Symptoms of RMSF, which appear approximately 3-14 days after exposure, include a moderate-to-high fever, fatigue, muscle aches, severe headache and chills. A rash also develops, which usually first appears on the arms, legs, palms of the hands and soles of the feet before spreading to other parts of the body. The causative agent of RMSF is *Rickettsia rickettsii*, a bacterium that is transmitted in the eastern and southern US by the American dog tick, *Dermacentor variabilis*.



Symptoms of Ehrlichiosis, which appear 7-21 days after exposure, are similar to those of RMSF, except that the rash rarely appears. In one form of Ehrlichiosis infection, the causative agent is *Ehrlichia chaffeensis*, a bacterium that is transmitted by the lone star tick, *Amblyomma americanum*. Another type of Ehrlichiosis infection is caused by a bacterium identical to or closely related to *Ehrlichia phagocytophila*. This organism is most likely transmitted by the *Ixodes scapularis* tick in the upper Midwest and northeastern US.

The risk of acquiring tick-borne infections can be reduced if people take a few precautions. In order for infection to be transmitted, an infected tick needs to be attached for at least several hours before the pathogen is passed on to the host. Therefore, inspection of ones self and removal of ticks as quickly as possible after leaving tick habitats, is very critical and can go a long way towards preventing infection, even if an infected tick was attached.

The best way to prevent bites if entering a grassy or wooded area is to wear a long-sleeved shirt and light-colored pants, with the shirt tucked in at the waist and the pants tucked into the socks. Repellents are most effective in keeping ticks away from any exposed skin if the repellents are sprayed on clothes. After leaving grassy or wooded areas, people should check for ticks on clothing or skin.

If a tick is attached to the skin, it can be removed with either tweezers or forceps by grasping the tick as close to the skin as possible. Ticks should not be removed with bare fingers. If tweezers or forceps are not available, tissue paper or paper towels can be used to prevent the transmission of any possible infection.

All three tick-borne diseases described can be successfully treated if diagnosed promptly. Those who develop the symptoms described, especially if they may have been exposed to ticks, should see a health care provider without delay.
